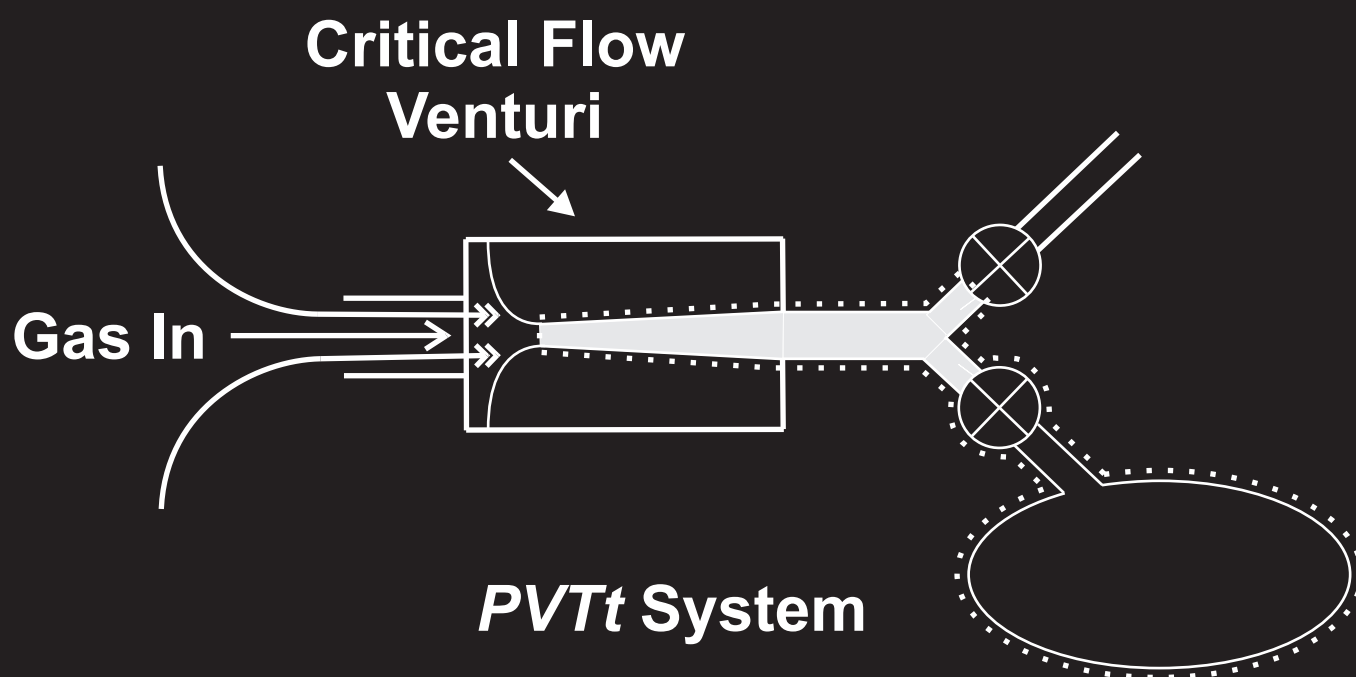


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¹At Boulder, CO 80303

²Some elements at Boulder, CO

Cover: The schematic diagram on the cover depicts a pressure, volume, temperature, and time (*PVTt*) primary gas flow standard. A *PVTt* standard diverts gas from a meter under test into a known volume for a measured time period and determines the density change in the volume via pressure and temperature measurements. Details of a new *PVTt* standard with uncertainties as low as 0.02 % are given in the article by Wright, Johnson, and Moldover on page 21, “Design and Uncertainty Analysis for a *PVTt* Gas Flow Standard.” Cover illustration arranged by C. Carey.

The *Journal of Research of the National Institute of Standards and Technology*, the flagship periodic publication of the national metrology institute of the United States, features advances in metrology and related fields of physical science, engineering, applied mathematics, statistics, biotechnology, and information technology that reflect the scientific and technical programs of the Institute. The *Journal* publishes papers on instrumentation for making accurate measurements, mathematical models of physical phenomena, including computational models, critical data, calibration techniques, well-characterized reference materials, and quality assurance programs that report the results of current NIST work in these areas. Occasionally, a Special Issue of the *Journal* is devoted to papers on a single topic. Also appearing on occasion are review articles and reports on conferences and workshops sponsored in whole or in part by NIST.

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